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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/822,822 | 04/02/2001 | Shinichi Baba | 04900.00001 | 8088 |
| 22907 | 7590 | 06/23/2005 | EXAMINER | |
| BANNER & WITCOFF 1001 G STREET N W SUITE 1100 WASHINGTON, DC 20001 | | | JONES, PRENELL P | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2667 | |

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/822,822

Applicant(s)

BABA ET AL.

Examiner

Prenell P. Jones

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 15 and 22-37 is/are pending in the application.
- 4a) Of the above claim(s) 9-14 and 16-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 15, 22-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Response to Arguments

1. Applicant's arguments with respect to claims 1-8, 15 and 22-37 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 2, 15 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ioannidis et al in view of Wang et al.

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Regarding claims 1, 2, 15 and 22, Ioannidis discloses (Abstract, pages 235-244, left column) a (page 238, right column, paragraphs 1 & 2) wireless and wired communication system that utilize mobile IP internetworking, which uses mobile support stations (MSS/base station) to manage (track/locate) mobile host, wherein the IP-in-IP (page 237, right column, page 240, left column thru paragraph 1 of the right column) encapsulation scheme is utilized, (page 242, left column thru page 244, left column) and the MSS uses a learning feature which enables the MSS to encapsulate and de-encapsulate IP data packets. Ioannidis is silent on a soft handoff system using IP-in-IP. Ioannidis is silent on soft handoff utilizing IP-in-IP encapsulation. Ioannidis further discloses (page 238, second paragraph) that it would be desirable to use spread spectrum or multi-channel radio communication for the purpose of detecting signal strength associated with over-lapping cells. Ioannidis is silent on soft handoff system using IP-in-IP. However, in a communication system that integrates both wireless and wire-line apparatuses, Wang (Abstract, Fig. 1-4, col. 2, line 48-59, col. 6, line 28 thru col. 10, line 21) discloses integrating wireless and wire-line whereby the wireless portion utilizes CDMA (soft handoff/handover) and the architecture includes mobile IP, plurality base stations and IP tunneling (IP encapsulation). Therefore, it would be obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement soft handoffs by utilizing IP tunneling/IP encapsulation in a mobile communication system as taught by Wang with the teachings of Ioannidis's mobile system for the purpose of further providing reliable routing and communication between stations (end-to-end) regardless of topology.

Regarding claims 3-8 and 23-35, as indicated above, Ioannidis discloses (Abstract, pages 235-244, left column) a (page 238, right column, paragraphs 1 & 2) wireless and wired communication system that utilize mobile IP internetworking, which uses mobile support stations (MSS/base station) to manage (track/locate) mobile host (MH), wherein the IP-in-IP (page 237, right column, page 240, left column thru paragraph 1 of the right column) encapsulation scheme is utilized, (page 242, left column thru page 244, left column) and the MSS uses a learning feature which enables the MSS to encapsulate and de-encapsulate IP data packets. Ioannidis further discloses (page 242, right column thru page 244, right column) the MSS stripping/decapsulate headers, thereby creating new headers that are routed with respect to forwarding strategies between a plurality of selected mobile hosts (MH). Ioannidis is silent on a soft handoff system using IP-in-IP. Ioannidis is silent on soft handoff utilizing IP-in-IP encapsulation.

Ioannidis further discloses (page 238, second paragraph) that it would be desirable to use spread spectrum or multi-channel radio communication for the purpose of detecting signal strength associated with over-lapping cells. Ioannidis is silent on soft handoff system using IP-in-IP. However, in a communication system that integrates both wireless and wire-line apparatuses, Wang (Abstract, Fig. 1-4, col. 2, line 48-59, col. 6, line 28 thru col. 10, line 21) discloses integrating wireless and wire-line whereby the wireless portion utilizes CDMA (soft handoff/handover) and the architecture includes mobile IP, plurality base stations and IP tunneling (IP encapsulation). Therefore, it would be obvious to one of ordinary skill in the art at the time of the invention to be

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motivated to implement soft handoffs by utilizing IP tunneling/IP encapsulation in a mobile communication system as taught by Wang with the teachings of Ioannidis mobile system for the purpose of further providing reliable routing and communication between stations (end-to-end) regardless of topology.

5. Claims 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ioannidis et al in view of Wang et al as applied to claims 3 and 23 above, and further in view of Sarkar et al.

Regarding claims 36 and 37, as indicated above, Ioannidis discloses a wireless and wired communication system that utilize mobile IP internetworking, which uses MSS/base station to manage MH, wherein the IP-in-IP encapsulation scheme is utilized, MSS encapsulate and de-encapsulate IP data packets, MSS creates new headers that are routed with respect to forwarding strategies between the plurality of selected mobile hosts, and Wang discloses integrating wireless and wire-line whereby the wireless portion utilizes CDMA (soft handoff/handover) and the architecture includes mobile IP, plurality base stations and IP tunneling (IP encapsulation). However, both Ioannidis and Wang are silent on the transmission of packets resulting in a soft handoff between two base stations. In a communication system wherein the architecture includes a plurality of base stations communicating with a node or a plurality of nodes whereby CDMA is utilized along with IP encapsulation, Sarkar et al discloses (Abstract, col. 4, line 32 thru col. 5, line 67) utilizing CDMA and the orchestration of a soft handoff between two base

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stations and the use of IP encapsulation. Therefore, it would be obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement soft handoff between base stations as taught by Sarkar's CDMA system for the purpose of further communicating data successfully.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prenell P. Jones whose telephone number is 571-272-3180. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Prenell P. Jones


June 20, 2005


CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2667
6/21/05